Abdulsamet Dagasan

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EDUCATION

Bilkent University, Ankara, Turkey
Ph.D., Electrical and Electronics Engineering, Present
Specialisation: *Unmanned Aerial Vehicles, Single and Multi-hop Communication, Path Planning*
M.S., Electrical and Electronics Engineering, December 2020 GPA: 3.57
Specialisation: *Unmanned Aerial Vehicles, Area Coverage, Cooperative Multi-target Tracking, Single and Multi-hop Communication, Path Planning*
B.S., Electrical and Electronics Engineering, June 2017 GPA: 3.68

EXPERIENCE

Research and Design Engineer **ASELSAN.**
January 2021- Ankara, Turkey
Developed signal processing algorithms and deep learning models as a contribution to a product based on Distributed Acoustic Sensing technology that is used for pipeline monitoring, railroad and facility security. The algorithms operate in real-time to observe and track locations via conventional fiber optic lines.

Electrical and Electronics Engineer Intern **Polaran Ltd.**
July 2016-August 2016 Ankara, Turkey
Designed and coded forward error correction algorithms for a transmitter and receiver on an FPGA to improve data transmission reliability on different modulation schemes. Collaborated with the engineering team to implement and test the coding design.

Electrical and Electronics Engineer Intern **Turkish Aerospace Industries, Inc.**
June 2015-July 2015 Ankara, Turkey
Gained exposure to avionics industry and developed foundational knowledge of avionics. Assisted the engineering team in troubleshooting of a faulty data obtained by inertial navigation system.

Software Engineer Intern **Kalitte Professional Information Technologies**
August 2014-September 2014 Ankara, Turkey
Acquired knowledge and familiarity with knowledge on .NET applications.

TEACHING EXPERIENCE

Casual Academic **Bilkent University**
Department of Electrical and Electronics Engineering
September 2017-December 2020 Ankara, Turkey
Assisted the teaching of two Electrical and Electronics engineering courses:

- "Electronic Circuit Design", 2020
- "Analog Electronics", 2017-2019

SELECTED PROJECTS

Activity Classification in Distributed Acoustic Sensing Systems: As a group of two we proposed a learning-based approach for activity classification problem targeting fiber optic DAS systems. (Developed with Python)

Train Detection and Tracking in Distributed Acoustic Sensing Systems: As a group of two we proposed classical computer vision techniques and neural-network based approaches to train detection and tracking task. (Developed with Python)

Neural Network on Games: As a group of three we developed a project using evolving

neural networks and deep-q learning networks to play games. (Developed with MATLAB and Python)

Model, Color and License Plate Recognition System Using Cameras Placed in Moving Vehicles: As a group of six, we developed a real-time system to recognize the model, color and license plate of moving cars with a camera placed in a moving vehicle. (Developed with C++ and OpenCV)

SELECTED COURSES

- "Computer Vision", 2022-2023 Fall
- "Deep Learning", 2022-2023 Fall
- "Neural Networks", 2021-2022 Spring
- "Machine Learning", 2017-2018 Spring
- "Dynamic Programming", 2017-2018 Fall
- "Telecommunications I-II", 2016-2017
- "Industrial Design Project", 2016-2017
- "Digital Signal Processing", 2016-2017 Fall

COMPUTER SKILLS

Languages: Python, MATLAB, C++, R, Java, VHDL, SQL, HTML, CSS
Technologies: Pytorch, Tensorflow, Keras, Git, Docker, OpenCV, Flet

ACHIEVEMENTS & SCHOLARSHIPS

- Exceptional Teaching Asistant Performance, 2019
- Fellowship, Bilkent University, 2012
- Ranked 156^{th} in the university entrance exam, 2013
- Ranked 289^{th} in the university entrance exam, 2012
- Third place in TÜBİTAK Regional Project Contest, Mathematics, 2012
- Second place in TÜBİTAK Regional Project Contest, Mathematics, 2011
- Passed first stage and second stage of TÜBİTAK National Science Olympiads, Mathematics, qualified and attended to Winter Courses, 2009 and 2010
- Second place in METU Mathematical Contest for High School Students, 2010

LANGUAGES

- Turkish - Native
- English - Advanced
- Russian - Beginner

PRESENTATIONS

- **Poster presentation**, Graduate Research Conference 2023, Ankara, Turkey
- **Oral presentation**, Signal Processing and Communications Applications 2022, Safranbolu, Turkey
- **Oral presentation**, Graduate Research Conference 2019, Ankara, Turkey

PUBLICATIONS

1. A. Dağaşan, M. Akur and M. U. Demirçin, "Fiber Optic Cable Termination and Signal Loss Detection in DAS Systems," 2022 30th Signal Processing and Communications Applications Conference (SIU), Safranbolu, Turkey, 2022, pp. 1-4
2. A.Dağaşan, M. Akur, E. Şahinoğlu, "Signal Loss Detection Method for Distributed Acoustic Sensing Systems", PCT, 2021, pending
3. M. Akur, A.Dağaşan, E. Şahinoğlu, "Frequency Response Estimation Method to Compensate for Channel Differences in Distributed Acoustic Sensing Systems", PCT, 2021, pending
4. E. Şahinoğlu, M. Akur, A.Dağaşan, "Extracting Method of Channel-Frequency Features in DAS Sensors", PCT, 2022, pending